



# FLEIS & VANDENBRINK

DESIGN. BUILD. OPERATE.

## THE VITAL ROLE OF TRAFFIC ENGINEERING IN BUILDING STRONGER COMMUNITIES

### WHY COMMUNITIES SHOULD HIRE A TRAFFIC ENGINEER

Traffic engineers play a crucial role in helping to ensure community safety. While each community's needs vary, traffic engineering aims to accomplish the safe and effective movement of people and goods on roadways.

Hiring a traffic engineer is hiring a specialist. Communities benefit from their expertise in managing and improving traffic flow. Traffic engineers use specialized knowledge and tools to assess and address problems to help communities function smoothly, safely, and efficiently.

At Fleis & VandenBrink (F&V), our traffic group offers a "Traffecta" of services, including analysis, design, and operations of projects ranging from small developments to complex transportation systems.

One of F&V's clients, the City of Birmingham, has a Multi-Modal Transportation Board that meets every month to discuss traffic engineering and multi-modal transportation topics for recommendation to the City Commission. F&V regularly attends these meetings to help answer any questions or concerns from board members.

"F&V evaluated and recommended changing a two-way stop at Frank and Pierce to a four-way stop," said Melissa Coatta, PE, Birmingham City Engineer. "The City Commission approved the recommendation, and since installing the stop signs, the city has received many positive comments on the 4-way stop installation."

With a clear understanding of the critical role traffic engineers play in helping maintain safe and efficient roadways, it's essential to explore how their expertise directly impacts today's most pressing issues.

### ADDRESSING KEY COMMUNITY ISSUES

In recent years, the most pressing issues for communities that contact F&V's traffic group include:

- 1. Parking:** Traffic engineers can help determine if a community has a parking issue. Parking studies gauge parking characteristics to estimate the demand for parking. These include the current population, commercial activity, the availability of alternate forms of transportation, and even a driver's demeanor while choosing a space. Parking studies determine the supply and demand for parking spaces at a facility. Information is collected on the current condition at a facility, such as the location,

type, time restrictions, number of parking spaces, and whether there are on-street or off-street parking spaces available.



- 2. School Congestion:** Communities employ traffic engineers to examine school operations and provide recommendations to improve student and vehicle safety. Engineers survey school-related traffic congestion, defined as the overcrowding and blocking of streets on or near school property, typically associated with children's car transportation to and from school. Traffic engineers identify areas of safety and operational concerns that can be mitigated through short-, mid-, and long-term improvements. This starts with a site visit and review of the existing operations during the school AM and PM peak periods. Field observations may include reviewing things such as existing pick-off/drop-off operations, queue lengths, safety considerations, busing, vehicle circulation, and intersection operations. From these surveys, the engineer will recommend improvements.
- 3. Pedestrian Safety:** Traffic engineers are frequently asked to examine pedestrian safety in communities. They study road user behavior and consider the roadway's design, the history of crashes, and traffic control. From these studies, traffic engineers make recommendations to improve pedestrian safety and mobility. Some of these may include dedicated pathways, pedestrian signals, or pedestrian bridges. Designated pathways allow pedestrians to cross the street safely and away from vehicles and include clear signage and lighting. Different types of traffic control devices are designed to increase driver awareness of pedestrians at a crosswalk. By prioritizing pedestrian safety, accidents can be reduced.

### CONTACT F&V TODAY

F&V has a team of traffic engineers with the experience and expertise to help build safer and stronger communities. For more information on our services, please contact F&V's Traffic Group Manager Julie Kroll, PE, PTOE, at 248.536.1998 or email her at [jkroll@fveng.com](mailto:jkroll@fveng.com).

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## TRAFFIC ENGINEERING SERVICES:

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Transportation Management Plans

Parking Studies

Pedestrian Studies

Traffic Calming

Traffic Impact Studies

Traffic Signal Warrant Analysis

Safety Studies

School Studies

Site Circulation Studies

Intersection Design

Signal Design

Signal Operations